ABOUT 450 MILES UP THE RED RIVER IN A LARGE PRAIRIE: PETER CUSTIS' SURVIVING BOTANICAL INFORMATION FROM THE RED RIVER EXPEDITION OF 1806

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ABSTRACT

In 1806 Peter Custis, botanist on the Red River Expedition, collected 26 plants mainly in the prairies in what is today Caddo and Bossier parishes, Louisiana. These were sent to Benjamin Smith Barton in Philadelphia. Two of the specimens are still in the Barton Herbarium. They are very unusual for the region today. We have looked for the other 24 specimens but without success. Those 24 specimens would certainly aid in understanding the ecology of the Red River area in 1806.

RESUMEN

En 1806 Peter Custis, botánico en la expedición del Red River, colectó 26 plantas principalmente el lo que hoy son los municipios de Caddo y Bossier, Louisiana. Fueron enviadas a Benjamin Smith Barton en Filadelfia. Dos de los especímenes están aún en el Barton Herbarium. Estas son muy raras en la región actualmente. Hemos buscado los otros 24 especímenes pero no hemos tenido éxito. Estos 24 especímenes ayudarían ciertamente a comprender la ecología del área del Red River en 1806.

INTRODUCTION

The first part of the title of this paper comes from an herbarium specimen label written by Benjamin Smith Barton for a plant collected by Peter Custis in 1806. The plant comes from "the forgotten expedition"—the ill-fated and suppressed Thomas Jefferson-sponsored 1806 Expedition to the Red River. This expedition was to have been a southern counterpart to the now famous Lewis and Clark expedition (Figs. 1, 2). The specimen, housed in the Barton Herbarium at the Academy of Natural Sciences, Philadelphia, is one of three Peter Custis plant specimens there. It is one of two known surviving plants of 26 that were collected by Custis on the expedition.

This paper has a twofold purpose. First, it makes the Freeman and Custis Red River Expedition of 1806 and its botanical contribution more familiar. The year 2006 will mark the bicentennial of the first botanical expedition into what is now northwestern Louisiana, southwestern Arkansas, and northeastern Texas (Anon 1807). Second, we call attention to an additional 24 collections made by Peter Custis in 1806 on the Red River that are not housed in the Barton Herbarium. These specimens, the identity of which is not known, might be crucial to under-

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Fig. 1. *Veronicastrum virginicum* (L.) Farw. collected by Peter Custis in 1806 "450 miles up the Red Rver in a large prairie." Specimen housed in the Barton Herbarium, Academy of Natural Sciences, Philadelphia. Photograph made at the Old Courthouse Museum, Natchitoches, Louisiana.

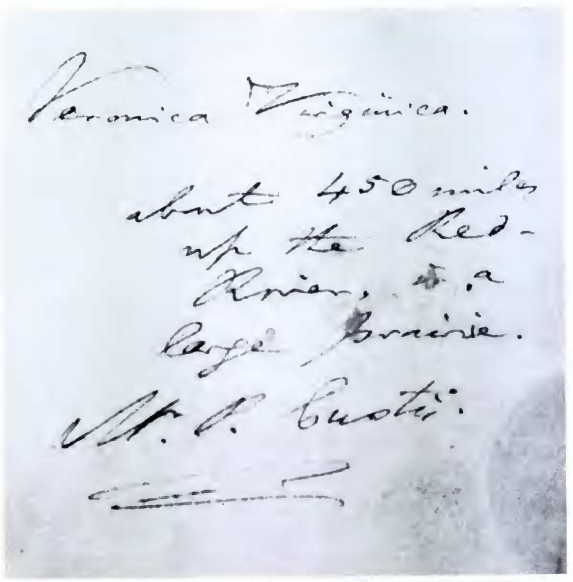

FIG. 2. Label information in Barton's hand. Photograph made at the Old Courthouse Museum, Natchitoches, Louisiana.

standing floristic changes that have occurred in the Red River region over the past two centuries.

THE EXPEDITION

Louisiana was purchased from France in 1803. Thomas Jefferson sent probes into the newly acquired territory, the most notable of which was the Lewis and Clark expedition begun in 1804. Other expeditions soon followed: Dunbar and Hunter up the Ouachita, Pike up the Arkansas, and Freeman and Custis up the Red (Jackson 1981). This latter expedition was to skirt the Spanish/United States border, follow the Red River to its source, and test the Spanish resolve to prevent American western expansion.

The Red River expedition, unlike other expeditions, was clearly politically

motivated but was disguised as scientific by the inclusion of a naturalist in the company. The purpose was to probe, none too delicately, the resistance of the Spanish beyond the as yet unsettled boundary between Louisiana and Mexico. Peter Custis, a young naturalist and medical student trained at that time by the most knowledgeable American botanist Benjamin Smith Barton, accompanied Thomas Freeman, a surveyor and astronomer and leader of the expedition, during the spring and summer of 1806. They were accompanied by 45 soldiers, interpreters, and guides on the Red River some 615 miles in search of its headwaters, then thought to be in the vicinity of Santa Fe. The expedition entered the Red River on May 2 and left Natchitoches, the northernmost post on the Red River, a month later. Soon after leaving Natchitoches, they encountered the lowest logjam of the Red River raft and had to divert their course to the bayous, "raftlakes," and sloughs that surrounded the River (Figs. 3, 4, 5) (Humphreys 1971; Flores 1984; Triska 1984; Bagur 2001). They reentered the main River just above present day Shreveport to find themselves unobstructed in a land of prairies, cedar forests, river bottomlands, and pine-oak-hickory bluffs and uplands.

The Spanish reaction was immediate and in force far beyond the modest Freeman party. The expedition was stopped on July 28 by Captain Don Francisco Viana and a force of between 200 and 300 mounted soldiers and infantry at a point near what is today Spanish Bluff in Bowie County, Texas, and turned back (Fig. 6). The Red River expedition was a political failure and an embarrassment to President Jefferson, who quietly suppressed it. Knowledge of the expedition was lost to history for almost 200 years. The Red River, north of Bowie County, remained virtually unexplored until the Marcy and McClellan Expedition of 1852, almost fifty years later (Marcy & McClellan 1854).

PETER CUSTIS AND THE BOTANICAL ASPECT OF THE EXPEDITION

Since Jefferson had received some criticism for not including a naturalist on the Lewis and Clark expedition, the Red River expedition was to be the first American-sponsored exploring expedition to include a trained naturalist. Presumably Barton, at the University of Pennsylvania at the time, selected the list of candidates, and Freeman made the final choice. The nod was given to the 25-year old medical student, Peter Custis of Virginia, who had entered the University of Pennsylvania as a medical student in 1804 and was about a year away from his degree. His background for the position consisted in having attended Barton's inclusive lectures on natural history. He had no field experience and was not considered a "naturalist" in any real sense of the word. On this expedition no provision was made for proper scientific preparation to preserve and send specimens to Barton. Consequently, Custis attempted to identify and describe in the field the plants he encountered either by familiarity or by reference to the few floras he took with him, one of which probably was Linnaeus's *Systema Vegetabilium*. As might be expected, there were names of many for-

Fig. 3. Raft with vegetation growing on it on Red River, 1873. Archives Department, Noel Memorial Library, Louisiana State University in Shreveport, Shreveport, Louisiana. R.B. Talfor photographer.

eign species contained in the list of about 190 plants that Custis described (Morton 1967; MacRoberts et al. 1997). Because Custis could not identify all of the plants to his satisfaction, he collected 26 and sent or took them to Philadelphia where two of them are known to survive in the Barton collection (Flores 1984). Custis listed these 26 plants separately in his report, most of which were collected in the extensive prairies that then existed north of present day Shreveport (Fig. 7).

Both Freeman and Custis sent regular reports to President Jefferson, the Secretary of War Henry Dearborn, and to Professor Barton. These were drawn together, and Nicholas King was given the task of redacting the accounts. His redaction was published in a very limited edition in 1807, of which only about a dozen copies survive as stated in an extensive account of this publication by Flores (1984). The King redaction has many errors and some omissions, which Flores (1984), using primary material, has corrected. The redaction in a partial facsimile edition has been reprinted (Adams 1985).

While some historians were aware of the expedition (e.g., Jackson 1981), it did not get full attention until Flores (1984) published his detailed account. In anthropological circles, the expedition was known because of its descriptions of Native Americans encountered above the Great Red River Raft (Morton 1967).

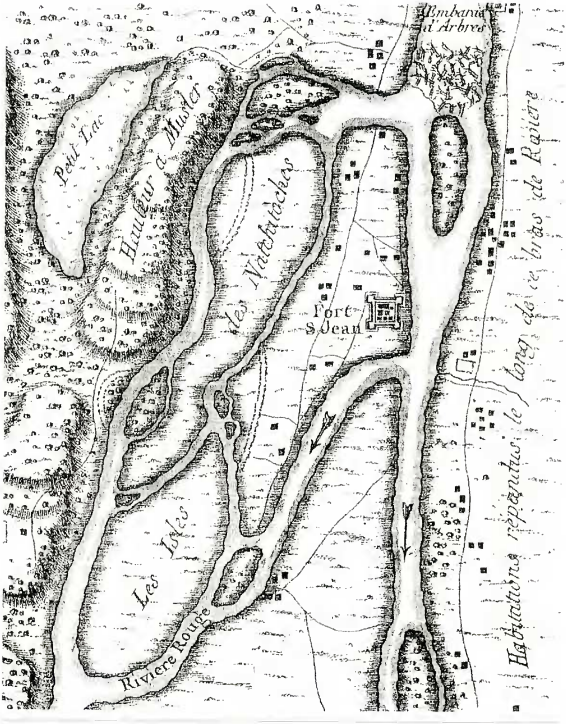

Fig. 4. Jacques Nicholas Bellin 1764 map of Natchitoches region of central Louisiana showing the lowest raft on the Red River in the 18th century. Archives Department, Noel Memorial Library, Louisiana State University in Shreveport, Shreveport, Louisiana.

In botanical, zoological, and ecological circles, the expedition remained unknown (e.g., McKelvey 1955; Ewan 1967; Sundell 1979; Lowery 1974a, 1974b). The expedition was unknown to Joseph Ewan (1952, 1969, 1988), Louisiana botanist and eminent historian of Bartonian Philadelphia. Morton (1967), using the

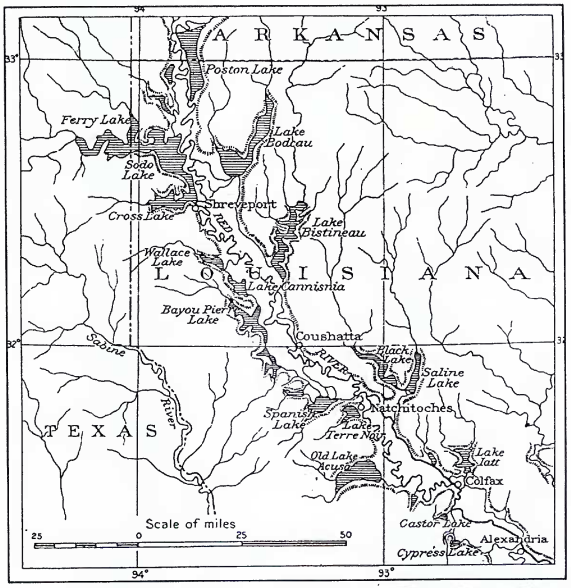

FIG. 5. Map of the "raft lakes" along the Red River created by overflow caused by the Raft. House Document 488, 59th Congress, 1st Session.

King redaction, published the first account of the plants observed by Custis. His aim was to interpret the Custis plant names and notes and provide modern identifications and nomenclature. Flores (1984) made the same attempt with the aid of Morton's (1967) paper. With the help of James Mears at the Academy of Natural Sciences in Philadelphia, Flores also located two of the Custis specimens and made photographic reproductions (Flores 1984:246–247). MacRoberts et al. (1997) reexamined the Custis accounts using, by that time, much better botanical information. Gilmore (2002) in his very important "Foundations of Southeastern Botany: An Annotated Bibliography of Southeastern American Botanical Explorers Prior to 1824" brought together the major works concerning the botanical aspects of the Freeman and Custis expedition. As Morton

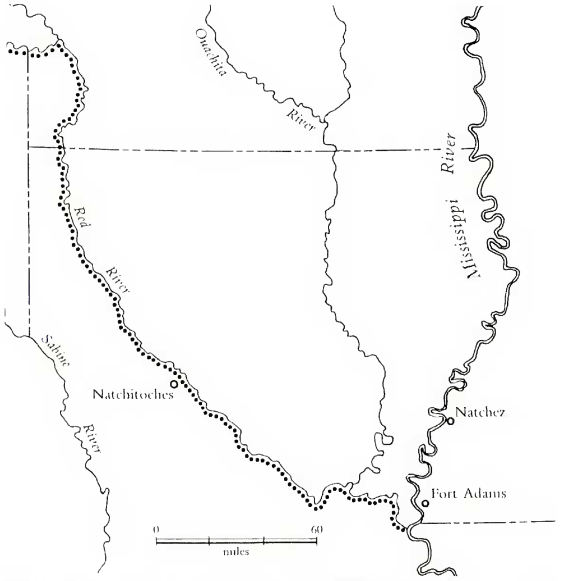

Fig. 6. Freeman-Custis route up the Red River. Modified from Jackson (1981, Fig. 10).

(1967) has rightly pointed out, the botanical part of the narrative is quite informative, being the first published information concerning the native plants of northwestern Louisiana and southwestern Arkansas, as well as the first descriptions of some of the plant communities, several of which have ceased to exist in the area, e.g., canebrakes, prairies, and cedar forests.

THE SPECIMENS

While it is possible to make informed guesses about the identity of the plants that Custis listed and described in his catalogues (Morton 1967; Flores 1984; MacRoberts et al. 1997), it is never possible to be certain without a specimen: thus the importance of the 26 plants collected by Custis that were forwarded to Barton.

No. 1, 2, & 4,. at the Coashatta.

No. 3. In prairies. No. 5, every where in plenty. The Coashatta Indians make a decoction with this which they drink at their *green corn dance*, previous to taking the black drink. It pukes them violently immediately after drinking it. Whether it is the emetic property of the plant, or th great quantity of warm water which they drink that causes it to operate so soon is doubtful.

No. 6. Very plentiful, particularly on the declivities of the hills,

No. 7. The poor people are said to use the root as a substitute for soap. The leaves are what the people of Campeachy make their cordage of.

No. 8. Abundant in the prairies. The root is a Caddo remedy for the convulsions of children. If at all useful it is most probably in cases arising from worms, by its anthelimintic properties.

No. 9. Is at the Coashatta.

No. 10. A speceis of *Mimosa* abundant in prairies.

No. 11. Abundant in the prairies.

No. 12. A climber.

No. 13. On the banks of the river. The leaves feathered with an odd one.

No. 14. Abundant in prairies.

No. 15. At the Coashatta Village.

No. 16. On Lake Badtka.

No. 17, 18. In the prairies.

No. 19. *Polypodium*, every where abundant.

No. 20 One of the most abundant vegetables in the country, found in every situation.

No. 21. Plentiful in the prairies.

No. 22. A small shrub growing near the head of the great raft,

No. 23. Found in the prairies.

No. 24. Supposed to be a species of *Lonicera*. It grows near the Coashatta village.

No. 25. Very abundant.

No. 26. At the Coashatta village.

NOTE. The above numbers refer to specimens of the plants.

Fig. 7. Facsimile copy of the list of 26 plants collected by Custis from the King redaction of the Freeman-Custis reports.

The two known surviving specimens, which come from above the Great Raft in the prairies along the Red River, are unusual for the present flora. One, *Veronicastrum virginicum* (L.) Farw., is very rare, if extant, in Louisiana today, and the other, *Eustoma russellianum* (Hook.) G. Don, has never been found in the area since. What were the other "prairie" specimens collected by Custis; and, if they were extant, would it be possible to envision the type of prairie where they occurred? Unfortunately, the prairies from which these plants came have long ceased to exist and are now known only from old maps and place names (Fig. 8).

THE SEARCH

On June 12 and 13, 2003, we made a thorough search of all of the specimens in the Barton and Lambert Herbaria at the Academy of Natural Sciences in Philadelphia. The Barton Herbarium, kept separate at the Academy of Natural Sciences, consists of 1674 specimens originally housed at the American Philosophical Society but moved to the Academy in 1898 (Pennell 1926). It consists of many specimens only a few of which were collected by Barton himself. The majority were collected by Frederick Pursh (Barnhart 1926). Barton's collection was previously searched for the same material by James Mears in the early 1980's with the same idea in mind; he found both of the specimens mentioned above (Flores 1984). Our search located three Peter Custis specimens, the same two from the Red River and one apparently from Virginia. These three specimens may have been all that were there in 1926 when both Pennell (1926) and Barnhart (1926) examined the collections or they would have done more than very briefly mention Custis in their papers. We also examined the Aylmer Bourke Lambert collection, which is the remains of Lambert's large collection purchased by Edward Tuckerman and given to the Academy in 1842 (Miller 1970). It has a good deal of American material but no Custis collections. This leaves 24 specimens that have not been located.

We do not know what happened to the other 24 Custis specimens. We only know that two of them did get to Philadelphia, then the hub of American botany (Pennell 1950). If two did, then probably all of them did. If that is so, then, where are they now? It is unlikely they were discarded; collectors and curators prized their herbaria. But, the fragmentation and neglect of plant collections (including minimal labeling) in the early years of American botany is well known (Pennell 1950). For example, Frederick Pursh, Barton's part-time curator and collector between 1805 and 1809, took various specimens from the Barton collection, including a significant portion of the Lewis and Clark collection, first to New York and then to London, and many plants simply disappeared (Ewan 1952; McCourt & Spamer 2003). After Barton's death in 1815, his collections were warehoused for over 80 years at the American Philosophical Society before they were entrusted to the Academy of Natural Sciences (Mears 1981). Por-

FIG. 8. Detail of Land Plat from 1837 of one of the extensive prairies that existed in what is today Caddo Parish, Louisiana. Clerk of Court Office, Caddo Parish, Louisiana.

tions of Pursh's collections that he took to England and left to Lambert were returned to the Academy in the mid-19th century (Miller 1970; Pennell 1950; McCourt & Spamer 2003). But as any browser of the *Index Herbariorum* learns, specimens collected by famous botanists are scattered worldwide. We would like to locate the missing specimens to better interpret the Red River ecology prior to the massive changes that occurred to the area during the subsequent two centuries.

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